

ABSTRACT OF THE DISCLOSURE

Compositions capable of reducing a risk of inflammation in a mammal(s) are provided. The compositions contain a therapeutically effective amount of a thermally processed (e.g., extruded) plant material that includes α -methylene- γ -butyrolactone (α -MGBL) and/or several structurally related parent phytochemicals capable of inhibiting enzymatic and/or transcriptional activity in the mammal, which is believed to treat and/or prevent inflammation. In this regard, the risk of incidence of other disease or ailments which are believed to be caused by inflammation (e.g., chronic inflammation) may be reduced. The phytochemical source can be derived from a single plant material, such as chicory.